CHINA.

IMPERIAL MARITIME CUSTOMS.

II.—SPECIAL SERIES: No. 2.

MEDICAL REPORTS,

FOR THE YEAR ENDED 31ST MARCH 1890.

38th and 39th Issues.

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National Oceanic and Atmospheric Administration

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Beltsville, MD
December 20, 2000

INSPECTOR GENERAL'S CIRCULAR No. 19 OF 1870.

INSPECTORATE GENERAL OF CUSTOMS,

PEKING, *31st December* 1870.

SIR,

1.—IT has been suggested to me that it would be well to take advantage of the circumstances in which the Customs Establishment is placed, to procure information with regard to disease amongst foreigners and natives in China; and I have, in consequence, come to the resolution of publishing half-yearly in collected form all that may be obtainable. If carried out to the extent hoped for, the scheme may prove highly useful to the medical profession both in China and at home, and to the public generally. I therefore look with confidence to the co-operation of the Customs Medical Officer at your port, and rely on his assisting me in this matter by framing a half-yearly report containing the result of his observations at.....upon the local peculiarities of disease, and upon diseases rarely or never encountered out of China. The facts brought forward and the opinions expressed will be arranged and published either with or without the name of the physician responsible for them, just as he may desire.

2.—The suggestions of the Customs Medical Officers at the various ports as to the points which it would be well to have especially elucidated, will be of great value in the framing of a form which will save trouble to those members of the medical profession, whether connected with the Customs or not, who will join in carrying out the plan proposed. Meanwhile I would particularly invite attention to—

a.—The general health of.....during the period reported on; the death rate amongst foreigners; and, as far as possible, a classification of the causes of death.

b.—Diseases prevalent at.....

c.—General type of disease; peculiarities and complications encountered; special treatment demanded.

d.—Relation of disease to { Season. / Alteration in local conditions—such as drainage, etc. / Alteration in climatic conditions. }

e.—Peculiar diseases; especially leprosy.

f.—Epidemics { Absence or presence. / Causes. / Course and treatment. / Fatality. }

Other points, of a general or special kind, will naturally suggest themselves to medical men; what I have above called attention to will serve to fix the general scope of the undertaking. I have committed to Dr. ALEX. JAMIESON, of Shanghai, the charge of arranging the Reports for publication, so that they may be made available in a convenient form.

3.—Considering the number of places at which the Customs Inspectorate has established offices, the thousands of miles north and south and east and west over which these offices are scattered, the varieties of climate, and the peculiar conditions to which, under such different circumstances, life and health are subjected, I believe the Inspectorate, aided by its Medical Officers, can do good service in the general interest in the direction indicated; and, as already stated, I rely with confidence on the support and assistance of the Medical Officer at each port in the furtherance and perfecting of this scheme. You will hand a copy of this Circular to Dr. ....., and request him, in my name, to hand to you in future, for transmission to myself, half-yearly Reports of the kind required, for the half-years ending 31st March and 30th September—that is, for the Winter and Summer seasons.

4.— * * * * *

I am, etc.,

(Signed) ROBERT HART,
I. G.

THE COMMISSIONERS OF CUSTOMS,—*Newchwang*, *Ningpo*, *Tientsin*, *Foochow*, *Chefoo*, *Tamsui*, *Hankow*, *Takow*, *Kiukiang*, *Amoy*, *Chinkiang*, *Swatow*, and *Shanghai*, *Canton*.

SHANGHAI, 1st *January* 1894.

SIR,

IN accordance with the directions of your Despatch No. 6 *A* (Returns Series) of the 24th June 1871, I now forward to the Statistical Department of the Inspectorate General of Customs, the following documents:—

Report on the Health of Foochow for the year ended 30th September 1888, pp. 5–8.

Report on the Health of Newchwang, pp. 3, 4;

Report on the Health of Foochow, pp. 9–11; each of these referring to the year ended 30th September 1889.

Report on the Health of Swatow for the nine months ended 30th September 1889, pp. 1, 2.

Report on the Health of Ningpo, p. 12;

Report on the Health of Amoy, pp. 20–24; each of these referring to the year ended 31st March 1890.

Report on the Health of Pakhoi for the eleven months ended 31st March 1890, pp. 13–15.

Report on the Health of Kiukiang for the eight months ended 31st March 1890, pp. 16–19.

Report on the Health of Swatow for the half-year ended 31st March 1890, pp. 25–28.

I have the honour to be,

SIR,

Your obedient Servant,

R. ALEX. JAMIESON.

THE INSPECTOR GENERAL OF CUSTOMS,
PEKING.

The Contributors to this Volume are:—

HENRY LAYNG, M.R.C.S., L.R.C.P. ..... Swatow.

W. MORRISON, M.B., CH.M. ..... Newchwang.

T. RENNIE, M.D., CH.M. ..... Foochow.

C. C. DE BURGH DALY, M.B., B.CH. ..... Ningpo.

A. SHARP DEANE, L.K.&Q.C.P., L.R.C.S.I. ..... Pakhoi.

RALPH S. MILLER, M.D. ..... Kiukiang.

B. STEWART RINGER, M.D., M.R.C.S., L.S.A. ..... Amoy.

DR. HENRY LAYNG'S REPORT ON THE HEALTH OF SWATOW

For the Nine Months ended 30th September 1889.

DURING the past nine months the health of the foreign residents has been good. The port has been exceptionally free from epidemic diseases. No case of cholera, as far as I can learn, has occurred amongst the natives, greatly to their surprise, as they consider that cholera nearly always follows upon exceptionally heavy rains. In one district here cholera is called "the big water" (*i.e.*, "the flood") disease. The fall of rain in the spring and early summer months was excessive.

In the months of February, March and April minor complaints were somewhat prevalent. During this time there were six cases of acute tonsillitis; five of these occurred in one quarter of the foreign Settlement of Kakchio, one severe case being that of a visitor to the port, who was attacked three days after arrival. This latter case, together with the occurrence of five others in a small community of this kind, led me to seek for some local origin; but none could be discovered, save the damp, foggy weather then prevalent.

In March a severe case of remittent fever occurred on Double Island. This was interesting in many respects, more especially as the popular opinion here is that this island is free from malaria. Some grounds exist for this opinion (although undoubtedly erroneous), as, after careful inquiry of an old resident of over 25 years' standing, I could hear of but two previous cases of malarial fever. The probable explanation of the origin of this case is to be found in the fact that a new house was then being erected on the island, and, as a consequence, much soil was turned over that had probably remained undisturbed for years.

During the early summer months several cases of diarrhœa with fever were under treatment, the attack being usually ushered in by a sudden rise of temperature, in some cases as high as 104°. Recovery usually followed these attacks in from two to four days; two cases proved somewhat difficult to treat, and extended over a longer period of time.

The heat during the early part of July was exceptionally severe, but, fortunately, I have no case to report of sunstroke or of severe fever following exposure. One case of typhoid fever from an ocean steamer was admitted into the Seamen's Hospital. From the history of the case the fever would appear to have been contracted in Shanghai, the patient being admitted on the tenth day of his attack. After a stay of 27 days the patient was discharged. The case presented no special points of interest.

The health of the children has been very good. There were only two cases of remittent fever, a few of febricula and one of intermittent fever. This satisfactory condition is, I think, partly due to the fact that nearly all the children here spent the hot months on Double Island. Double Island is nearly 5 miles nearer the mouth of the river than Swatow, and is so situated that it derives full benefit from all sea breezes.

The cooler nights and the excellent sea bathing attract many of our number to Double Island during the hot months. This change, small as it is, often proves very beneficial. In reference to sea bathing, it cannot be too strongly insisted upon that after sunrise or before sunset it is attended with considerable danger. Four cases of fever, fortunately slight, have occurred this summer, which were clearly due to bathing before sunset.

Through the kindness of Dr. LYALL, of the English Presbyterian Mission, I have seen much of the work at the Mission Hospital; I can therefore report with greater confidence on the prevalence of epidemic diseases amongst the natives.

Five births have occurred.

I have one death to record. Postmortem examination showed congestion of lower lobe of left lung; a large, fatty liver; granular, contracted kidney.

For the meteorological table I am indebted to the kindness of Capt. C. H. PALMER.

METEOROLOGICAL TABLE, January to September 1889.

MONTH.	WIND.					BAROMETER.				THERMOMETER.						WEATHER.		
	No. of Days N. to E.	No. of Days E. to S.	No. of Days S. to W.	No. of Days W. to N.	No. of Days Calm.	Highest by Day.	Lowest by Day.	Highest by Night.	Lowest by Night.	Highest by Day.	Lowest by Day.	Highest by Night.	Lowest by Night.	Averages. Wet Bulb.	Averages. Dry Bulb.	No. of Days Rain.	Rainfall.	No. of Days Fog.
	D. h.	*D. h.*	*D. h.*	*D. h.*	*D. h.*	*Inches.*	*Inches.*	*Inches.*	*Inches.*	°	°	°	°	°	°	*D. h.*	*Inch.*	*D. h.*
January	19 6	7 0	...	2 18	2 0	30.490	30.046	30.476	30.146	67.0	56.0	66.0	55.0	54.0	57.5	1 23½	2.06	1 12
February	11 6	7 0	1 12	2 12	5 18	30.500	30.024	30.470	30.080	73.0	55.0	70.5	55.0	53.7	58.8	1 22	1.53	1 18
March	12 0	11 18	1 6	1 0	5 0	30.568	29.980	30.500	29.950	75.5	56.0	72.0	59.0	58.8	61.9	1 15	2.62	3 18
April	10 0	8 18	2 12	2 6	6 12	30.348	29.890	30.250	29.736	77.0	63.0	77.0	62.0	65.7	67.6	2 18	3.89	8 18
May	8 6	10 12	5 0	1 12	5 18	30.256	29.800	30.230	29.800	84.0	71.0	83.0	71.0	74.6	76.3	5 3½	16.11	...
June	2 0	6 12	15 0	1 18	4 18	30.120	29.800	30.150	29.700	87.0	86.0	77.0	77.0	78.4	81.7	3 17	10.94	...
July	1 12	6 6	15 6	3 18	4 6	30.150	29.700	30.050	29.700	91.0	82.0	88.0	81.0	86.0	80.8	1 18	7.51	...
August	2 6	13 12	5 18	3 0	6 12	30.106	29.700	30.100	29.710	87.0	80.0	86.0	81.0	82.8	79.8	1 17	9.01	...
September	5 6	14 0	4 12	1 6	5 0	30.200	29.900	30.228	29.915	89.0	78.0	87.0	74.0	81.5	77.8	0 22	2.23	...

DR. W. MORRISON'S REPORT ON THE HEALTH OF NEWCHWANG

For the Year ended 30th September 1889.

DURING the period under review the health of the foreign residents in this Settlement has continued good.

As regards the climatal conditions, the winter was a mild one. During the hottest period of summer diarrhœa was prevalent, and, what is something unusual, one or two cases of dysentery occurred.

Measles in a mild form, two cases of small-pox among the children and two cases of typhus among the adults make up the number of infectious diseases treated.

In the small-pox cases (both aged about 2 years) I painted the faces on the fourth day with a solution containing 20 grains of nitrate of silver to an ounce of water, as recommended by Mr. HIGGINBOTTOM, with very good results.

Three births and one death have taken place during the year.

The death was that of a female, aged 13 years, due to mitral stenosis following an attack of acute rheumatism. She had suffered from acute rheumatism twice before arrival in this Settlement, with resulting mitral injury.

Happily, the year, which began with depressed trade and famine, has ended with plenty. Encouraging reports of a plentiful harvest are being daily received. The floods, which I have referred to in my Report for the previous year, in their varied results continued to occupy public interest during the earlier portion of the year under review. Great exertions were made by the foreign residents here to make the distribution of relief in the inundated districts as thorough as possible. The missionaries at Moukden, in addition to their hospital, with the friendly aid and co-operation of the native authorities, rented two unoccupied buildings—one as a refuge, the other as a fever hospital,—where the patients had the benefit of attendance from Drs. YOUNG and GREIG.

Being unable to visit any of the districts, Dr. GREIG has kindly furnished me with the following notes on treatment of patients from the famine district:—

The diseases most common are those resulting from prolonged privation and bad hygiene. In the first rank must be placed the infectious fevers.

Typhus has been very severe in those it attacked. About eight cases have come under my notice; of these, two died, and of the others, some were lost sight of before gaining much strength.

Of typhoid fever, there were few cases and comparatively mild attacks.

Cholera threatened us. At the beginning of September I saw two cases. Both made good recoveries.

The plague, properly so called, I have not met with; but many of our cases of simple fever have had boils and carbuncles, as also local and general dropsies, thus closely resembling it.

Breakbone fever, or dandy fever, is very common. Of its identity with the tropical disease of that name I am not quite sure; but it answers in almost every detail to descriptions of dandy fever in the standard works. There have been no fatal cases of it so far as I know, but the pains in the limbs and head and great restlessness complained of are often very distressing and hard to alleviate.

Diseases of the digestive system have been by far the most common. In our hospital almost everyone complains of a "sore stomach." All sorts of dyspepsia and irritable stomach prevail, probably as the result of the indigestible and raw vegetables and herbs on which the people have been living.

Persistent diarrhœa, suppurating glands and necrosis and acute inflammation of the long bones are also among the diseases prevalent.

To sum up, the great majority of our cases (about 95 per cent.) are rescued by proper feeding and clothing, combined with the judicious use of drugs.

Mr. J. ARMOUR, Harbour Master, has kindly assisted me in drawing up the following table:—

METEOROLOGICAL TABLE, October 1888 to September 1889.

MONTH.	ANEROID BAROMETER.		NO. OF DAYS ON WHICH THE TEMPERATURE FELL BELOW						NO. OF DAYS ON WHICH THE TEMPERATURE ROSE ABOVE						No. of Days on which Rain fell.	Total Amount of Rainfall.	No. of Days on which Snow fell.	No. of Days on which there were Dust Storms.	No. of Days on which High Winds blew.
	Highest.	Lowest.	°F. -15	°F. -10	°F. 0	°F. 10	°F. 20	°F. 32	°F. 50	°F. 60	°F. 70	°F. 80	°F. 85	°F. 90					
1888.	*Inches.*	*Inches.*														*Inches.*			
October.....	30.70	29.80	...	...	...	...	...	6	21	7	...	...	...	...	3	11.0	1	...	10
November...	30.74	30.02	...	...	...	...	8	20	4	...	...	...	...	...	1	0.1	...	...	8
December ...	30.84	30.06	...	...	...	4	23	6	...	...	...	...	...	...	...	...	2	1	9
1889.																			
January.....	30.84	30.15	...	...	19	11	1	...	...	...	...	...	...	...	...	...	4	...	5
February.....	30.80	30.17	...	...	1	9	14	4	...	...	...	...	...	...	...	...	1	...	7
March.....	30.66	29.88	...	...	...	...	10	16	...	...	...	...	...	...	...	...	2	4	15
April.....	30.50	29.46	...	...	...	...	...	7	11	9	...	...	...	...	5	2.3	2	...	7
May.....	30.40	30.10	...	...	...	...	...	...	4	20	7	...	...	...	3	0.6	...	...	8
June.....	...	...	...	...	...	...	...	...	...	2	19	9	...	...	9	2.6	...	1	6
July.....	...	...	...	...	...	...	...	...	...	...	6	25	...	...	6	2.3	...	...	3
August.....	...	...	...	...	...	...	...	...	...	...	10	21	...	...	8	5.6	...	...	4
September...	...	...	...	...	...	...	...	...	4	14	12	...	...	...	9	3.4	...	...	...

NOTE.—Owing to an accident to the barometer the readings were not taken during the months of June, July, August and September.

DR. T. RENNIE'S REPORT ON THE HEALTH OF FOOCHOW

For the Year ended 30th September 1888.

DURING the year the number of foreign residents was about 330, and among them there were 11 births and 3 deaths.

In connexion with the former, I have to record the valuable aid obtained from the use, for alternate periods, of digitalis and convallaria maialis preceding labour, and of digitalis and chloral hydrate during labour, in a patient the subject of valvular disease of the heart, who, during the later weeks of pregnancy, suffered from symptoms of cardiac failure, palpitation, dyspnœa and dropsy with albuminuria.

One death was caused by tympanites, with sudden failure of the heart's action, while convalescing from a low febrile attack; one from typhoid fever; and another from diphtheria.

The first-mentioned case occurred in an elderly lady of very full habit of body, who had resided in China over 20 years. For over 12 months she had suffered from a morbid condition of the blood. This was at first indicated by large carbuncular boils, followed by general ill health and persistent urticaria, which, in spite of a sojourn by the sea in a neighbouring port, persisted throughout the year. On 30th December a low form of fever commenced, and on 9th January it ended in free perspiration. While the fever lasted the temperature taken in the axilla never exceeded 101° F. Although for over nine years symptoms indicative of heart weakness had exhibited themselves, chiefly by a slow, weak, intermittent pulse, the heart's action kept quiet during the feverish attack. On 10th January temperature was normal, and general improvement continued till the evening of 11th January, when I was suddenly called in to see the patient, who was suffering severely from tympanites, which she thought had been caused by a chill caught while sitting up during the afternoon. As in the morning the bowels had acted naturally, heat was applied over the abdomen and a stimulant carminative draught given. This afforded relief. On the following morning patient expressed herself as feeling very comfortable. The tympanites was relieved, but the heart's action had now become disturbed. Pulse was 120, feeble, rapid and irregular. Breathing was quickened, but temperature was normal. By frequently giving alcoholic stimulants with liquid aliment throughout the day, and an occasional dose of digitalis, some improvement in the circulation resulted, and, beyond a feeling of inability to go to sleep, patient expressed herself as feeling comfortable. Early, however, on the morning of the 13th death suddenly occurred.

The patient who died of typhoid fever was a Portuguese, aged 34 years. He was unfit for duty on 13th April, and, hoping to overcome his indisposition by a dose of purging pills, did not seek medical advice till the evening of the 16th. When I visited him he had a flushed face and complained much of headache. The pulse was rapid, and temperature 104° F. The tongue was coated; the abdomen swollen and tender; the spleen enlarged; and the motions loose. The temperature ranged about 104° till the

22nd, when considerable hæmorrhage from the bowel took place and caused the thermometer to fall below normal. On the evening of the 24th the temperature reached 105°.5, and continued high. The symptoms generally became more severe. On the 29th the temperature ranged between 105° and 106°. From past experience of antifebrin, I hoped at least to be able to control the temperature, but in this case the drug proved futile. Early on the morning of 30th April the patient died from exhaustion. There can be little doubt that the use of cathartics at the early stage of the disease had considerable influence in determining the severe type of fever and the fatal termination. Of late years, in my practice, this is the second fatal case of typhoid that has pursued a similar course after the use of purgatives at the outset of illness; and this experience, in a country where the disease is endemic and where all factors favouring the propagation of the malady are abundant, ought to act as a warning to residents against the common and thoughtless practice of resorting to purgatives for the treatment of almost every indisposition.

In the spring three other cases of typhoid fever in Europeans were treated.

On 2nd May I was called to attend the last-mentioned fatal case. The patient was an Eastern Portuguese child, aged 7 years, who had been ailing since 30th April. At the time of my visit he looked pale, prostrated, complained of sore throat, and the glands at the angle of the jaw were swollen. The tonsils were covered with false membrane, which on the right side extended as far as the posterior surface of the pharynx. Temperature was 103°; pulse 100, weak. On the following day the child looked extremely weak. A piece of false membrane on the left tonsil was hanging loose, leaving exposed a raw, bleeding surface. Breathing, other than being quickened, was unaffected, and the false membrane did not extend to the air passages. On the morning of 4th May the child died. Profound prostration being the most prominent symptom in this case, attention was mainly directed to frequent feeding with liquid aliment and alcoholic stimulants. Tincture of perchloride of iron was, every three hours, applied to the throat. Since my first visit to deceased he had been strictly isolated from other members of his family, but on 10th May a younger sister became affected. In her case the false membrane was confined to the tonsils, and the disease, pursuing a mild course, ended in recovery.

On 29th April the boy had fallen into a pond, the contents of which were contaminated with sewage and nightsoil. In the absence at that time of any trace of diphtheria in the neighbourhood, I think the origin of disease may be attributed to his having swallowed some of the impure pond water.

During the year these were the only cases of diphtheria treated. Although in former years I had attended four cases in natives, the disease has never during my residence here been epidemic.

Throughout the year the general health of foreign residents was good, and serious climatic illness was of less frequent occurrence than usual. Only three cases of dysentery—which, as formerly, yielded readily to the ordinary treatment by large doses of ipecacuanha—were met. A patient whose symptoms—fever, dysenteric diarrhœa, with circumscribed enlargement of the liver—pointed towards liver abscess, after the administration of two large doses of ipecacuanha, rapidly recovered.

The most unhealthy periods were December and January, when a mild form of remittent fever, accompanied in most cases by sore throat, was prevalent; and on the approach of summer, in May and June, many suffered from deranged liver functions. In spring, among foreign children whooping-cough was epidemic.

For the following extracts from the Pagoda Anchorage Customs meteorological tables I am indebted to Mr. Harbour Master LOVATT:—

METEOROLOGICAL TABLE, October 1887 to September 1888.

MONTH.	WIND.					BAROMETER.				THERMOMETER.					WEATHER.		
	No. of Days N. to E.	No. of Days E. to S.	No. of Days S. to W.	No. of Days W. to N.	No. of Days Calm.	Highest by Day.	Lowest by Day.	Highest by Night.	Lowest by Night.	Max.	Min.	Mean.	Averages. Wet Bulb.	Averages. Dry Bulb.	No. of Days Rain.	Rainfall.	No. of Days Fog.
1887.						*Inches.*	*Inches.*	*Inches.*	*Inches.*	°	°	°	°	°		*Inch.*	
October.....	14 6	4 12	2 6	8 0	2 0	30.52	29.84	30.37	29.88	87.0	55.5	71.25	64.5	72.0	1 6	0.79	...
November...	19 0	2 6	0 18	7 18	0 6	30.49	30.11	30.58	30.17	79.0	47.0	63.00	60.0	65.0	1 0	0.50	1 0
December ...	18 0	2 0	1 12	8 0	1 12	30.52	30.11	30.51	30.15	79.0	37.0	58.00	49.5	58.0	0 6	0.02	0 18
1888.																	
January.....	22 0	2 18	0 12	4 18	1 0	30.52	30.08	30.56	30.10	72.0	34.0	53.00	48.0	54.0	2 6	2.55	0 6
February	16 6	2 18	2 6	5 12	2 6	30.61	30.06	30.58	30.07	68.0	35.0	51.50	45.0	51.5	3 12	3.72	0 18
March	17 12	4 12	2 6	3 18	3 0	30.48	30.00	30.45	30.02	86.0	57.0	71.50	57.5	65.5	3 0	4.01	2 12
April.....	15 12	7 12	1 18	2 6	3 0	30.41	29.40	30.34	29.40	89.0	45.0	67.00	62.5	67.5	7 6	6.62	1 18
May	10 12	8 0	6 0	3 6	3 6	30.24	29.72	30.40	29.74	90.0	53.0	71.50	66.0	72.0	4 0	6.14	2 12
June	7 0	8 6	9 18	2 18	2 6	30.05	29.69	30.04	29.67	94.0	60.0	77.00	73.0	77.5	4 12	8.97	0 18
July.....	13 6	6 0	6 0	3 18	2 0	30.08	29.65	30.30	29.60	99.0	69.0	84.00	78.0	85.5	2 0	1.29	...
August.....	6 18	7 6	8 18	6 6	2 0	30.07	29.52	30.06	29.34	101.0	66.0	83.50	80.0	86.5	5 0	20.14	...
September...	15 18	7 0	1 6	3 18	2 6	30.27	29.88	30.25	29.88	97.0	61.0	79.00	75.5	81.0	3 0	2.98	...

The most remarkable feature of the year was the unusual and extreme drought experienced during the first few months. In December and January nearly all the wells and ponds had become almost dry. Advantage of this was taken to empty the ponds of foul deposits previously washed into them by rains falling on their surroundings. Filthy effluvia from these heaps of concentrated sewage, and from street drains which depend solely on heavy rains for cleansing, being abundant, amply accounted for the low fever and sore throat prevalent at that time.

Towards the end of January rain in considerable quantity fell. In the first few days in February snow covered the surrounding mountains to within 500 feet of the valley. Although about the usual amount of rain fell in February and March, the ordinary level of water in wells and ponds was not reached till April.

The spring was damp and weather changeable. Throughout the summer the atmosphere was moist, hot and depressing. Although typhoons were frequently predicted, wind storms were

infrequent. About the middle of August, however, the monotony of the weather was relieved by a tremendous downpour of rain, followed by a severe typhoon. After this the heat never gained its former height.

In April, and again in August, heavy rains in the interior caused the Min to overflow its banks.

Excepting typhoid fever, which was, during the latter half of the year, unusually prevalent, natives were remarkably free from all other kinds of disease. Although typhoid is found here at all times, it was not until the end of February that its prevalence became notable. That this season was favourable for the propagation of such a disease can be readily understood. Here, rain being almost the only scavenger, the first rains after a prolonged drought would naturally bear an unusual amount of filth of all sorts into wells and ponds, and thereby increase the pollution of their scanty contents. After rain the discoloured water in these receptacles, whence the natives draw their water supplies for household purposes, indicates the source of contamination and readily accounts for the rapid distribution of the disease.

During the year cholera did not occur.

DR. T. RENNIE'S REPORT ON THE HEALTH OF FOOCHOW

For the Year ended 30th September 1889.

ABSTRACT of METEOROLOGICAL OBSERVATIONS taken at PAGODA ANCHORAGE, October 1888 to September 1889.

MONTH.	WIND.						BAROMETER.				THERMOMETER.					WEATHER.		
	No. of Days N. to E.	No. of Days E. to S.	No. of Days S. to W.	No. of Days W. to N.	No. of Days Calm.	No. of Days Variable.	Highest by Day.	Lowest by Day.	Highest by Night.	Lowest by Night.	Max.	Min.	Mean.	Averages. Wet Bulb.	Averages. Dry Bulb.	No. of Days Rain.	Rainfall.	No. of Days Fog.
1888.							*Inches.*	*Inches.*	*Inches.*	*Inches.*	°	°	°	°	°		*Inch.*	
October.....	14	2	...	...	...	15	30.51	29.22	30.49	29.23	89	49	69.0	63.5	71.5	9	3.74	2
November...	15	...	...	4	...	11	30.50	29.21	30.54	29.82	84	51	67.5	61.0	68.0	9	1.54	7
December...	12	...	...	2	...	17	30.60	30.11	30.55	30.02	78	41	59.5	56.5	60.5	7	2.59	4
1889.																		
January.....	28	1	...	1	...	1	30.58	30.09	30.59	30.02	71	55	63.0	50.0	53.0	8	1.32	6
February....	13	1	...	2	...	12	30.53	30.00	30.53	29.97	74	54	64.0	51.0	55.5	8	2.21	4
March.....	18	...	1	6	1	5	30.62	29.91	30.59	29.95	81	46	63.5	57.5	62.0	16	6.86	6
April.....	10	3	...	1	...	16	30.29	29.80	30.25	29.80	85	42	63.5	64.0	68.5	15	5.41	7
May.....	15	2	1	1	...	12	30.28	29.82	30.25	29.73	88	51	69.5	69.0	73.5	14	5.38	3
June.....	8	3	8	...	2	9	30.06	29.74	30.01	29.71	96	61	77.5	77.0	82.5	10	1.87	1
July.....	4	4	15	...	2	6	30.02	29.75	30.04	29.70	101	76	88.5	80.5	88.5	5	1.20	...
August	9	3	7	2	3	7	30.10	29.62	30.09	29.62	98	70	84.0	77.5	85.5	6	5.97	...
September...	22	2	2	...	2	2	30.27	29.90	30.22	29.88	97	64	80.5	75.0	82.5	6	0.77	...

For the above table I am indebted to Mr. Harbour Master H. A. MCINNES.

The elders of the community considered the past summer the warmest they had experienced. In July and August, in the foreign Settlement, the minimum temperature at night usually exceeded 80°; whilst the maximum temperature in the shade by day was generally considerably over 90°. The rainfall during the last quarter of the year under notice was exceptionally low, and the consequent drought was so severe that the second crop of rice proved, in most instances, a complete failure.

Among foreign residents, who numbered about the same as last year—namely, 330,—there were eight births and three deaths. As to the former, there was nothing unusual to relate.

The cause of death in two of the fatal cases was typhoid fever. In January a robust adult was said to have died of hyperpyrexia at the end of the second week of the fever. In the other fatal case of this disease there was a true relapse. This set in seven days after the subsidence of the temperature of the primary attack, which had lasted six weeks. In the third week of the relapse death resulted from perforation of the bowel and peritonitis.

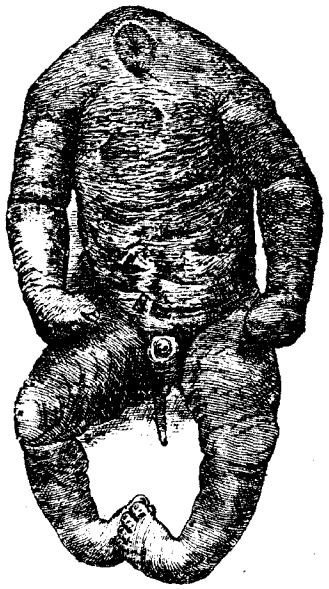
In the third fatal case death occurred during a paroxysm of angina pectoris. Deceased was 59 years of age, and had resided in Foochow for 36 years without ever having been away from the port. A well-marked arcus senilis, occasionally an intermittent pulse, with other signs of cardiac weakness, had been observed for some years before death. In the course of the 18 months preceding the fatal paroxysm there had been three attacks of angina, which had readily yielded to treatment by antispasmodics and inhalations of nitrite of amyl.

Besides an unusual prevalence of the ordinary climatic illnesses among foreigners during the winter and spring, there were eight cases of typhoid fever of a severe type.

In November many of the European children under 4 years of age suffered from ulcerative stomatitis, accompanied by fever and diarrhœa. In some instances the increased temperature lasted a week.

Notwithstanding the great heat experienced during the last quarter of the year, the health of the community was exceptionally good. The air being unusually dry favoured evaporation from the surface of the body, and thus rendered the high temperature more tolerable and the usual morbid conditions of a hot summer infrequent.

The appended photograph gives a very good illustration of deformity, due to complete arrest of development of the fœtal head:—



From year to year several cases of difficult labour among natives come under my care, and although the subject of the illustration did not and could not increase the difficulties, it was the appearance of a headless infant, whose head was supposed to be retained, that caused the native midwife to seek my assistance.

On visiting the mother I found that after an illness of four hours' duration, and half an hour before my visit, she had given birth to an acephalous monster. The placenta had been expelled, the womb had contracted, and all that was left for me to do was to assure the mother that her labour was ended.

The mother was 22 years of age, had been married for seven years, and had previously given birth to two healthy children, now aged 3 and 5 years respectively.

The infant was said to have moved and to have emitted respiratory sounds after birth. The body was well developed, the hands were clubbed, and the feet were in the condition of equino-varus. Unlike most others of the same class, it was not a twin.

Local folk-lore attributes the cause of this deformity to the mother, during gestation, sitting at night before a lamp and using a pair of scissors. The shadow of the scissors while in use is supposed to penetrate the womb and cause the deformity in the fœtus. Harelip and intra-uterine amputations of fœtal limbs are also attributed to the same cause.

DR. C. C. DE BURGH DALY'S REPORT ON THE HEALTH OF NINGPO

For the Year ended 31st March 1890.

THE general health of the foreign community has been good, that of the Customs staff exceptionally so.

There were six births and one death.

The cause of death was sunstroke. The deceased, an adult male, during unusually hot weather in July, fell, unconscious, in the street. Death occurred 20 minutes afterwards. The attack had evidently been threatening some time before, as he started from his house for his office, in a semi-conscious state, in sleeping clothes and a straw hat.

The only other cases of serious illness were one of rheumatic fever with cerebral complications, complete recovery taking place; one of heart disease; one of central amblyopia (toxic); and one very chronic case of bladder trouble.

One of the labour cases was complicated by an adherent placenta and severe hæmorrhage; the others were natural. All did well.

DR. A. SHARP DEANE'S REPORT ON THE HEALTH OF PAKHOI

For the Eleven Months ended 31st March 1890.

SINCE last May the health of the foreign community has been fairly good, and no serious cases of illness have to be recorded; still, the general health of each individual is not quite satisfactory, dyspeptic symptoms being very common, caused by the want of a good mixed diet and by a scanty supply of food. The unvarying chicken, of which each person consumes from 400 to about 600 in the year, eggs, and, at times, good fish are what we have to depend upon for the animal portion of our diet for nine months of the year. From December to March we have fresh mutton twice a week and a plentiful supply of fresh vegetables, which makes a great change both in the health and appearance of everyone.

During the autumn five cases of nephrolithiasis, in a mild form, occurred among foreigners—an affection liable to occur here about the month of November.

In this climate, where profuse diaphoresis for nearly eight months in the year lessens the excretion of urine to more than half the normal quantity, the urine excreted, except when a considerable amount of fluid is taken, being high in colour and specific gravity, and frequently depositing numerous uric acid crystals, it can easily be understood how this affection comes about.

At the change from the hot to the cold season a person goes to bed perspiring; the body is only covered by pyjamas and usually a "cholera belt." About 4 A.M. the temperature falls, a cold wind blows through the room, and, being asleep, no extra covering is drawn up. Most cholera belts protect the abdomen, but not the loins. The jacket of the pyjamas is, in most cases, made too short; and if a person be seen who has been asleep for some time, it will nearly always be observed that the waist is uncovered, unless the jacket is tucked inside the trousers at the waist, which is a hot way of wearing them. This is a common mode of getting what is called a chill. The loins being thus exposed to a cold wind, the person rises in the morning feeling "out of sorts," and in a day or so is in bed sick. The kidneys have become congested, and, being already hampered by the lack of sufficient flushing, resent the increased work thrown upon them. In these cases, although calculi may not form, the urine very probably precipitates, it may be in the renal pelvis or in the ureters, causing pain from the irritation of the passage of the precipitate.

The symptoms are, after a day or so of general indisposition, a severe catching pain, aggravated by stooping, worse in the morning on getting out of bed, and changing to a gnawing pain as the day wears on. The temperature rises 5 or 6 degrees; dry skin; pulse about 100; furred tongue; anorexia; frontal headache; urine scanty, acid in reaction, generally dark coloured, usually clear when passed, but at times opaque, specific gravity 1,035 to 1,040.

Under the microscope, just after the urine has been voided, are seen numbers of dumb-bell and uric acid crystals, epithelium, and, in some cases, numerous blood corpuscles. The patients say they have caught cold and are suffering from lumbago or rheumatism. This condition continues, with little variation, until the patient is treated, as the following case will illustrate:—

In November last year a patient came to me as a bad case of rheumatic fever. He stated that about a fortnight previously he had been exposed to the sun in a boat while on a journey, and that on the same night he had got a chill. The following morning, on getting out of bed, he was seized with such a severe catching pain across the loins he dared hardly move, and he passed a small quantity of urine, the colour of strong tea. Fever then followed, and he remained in bed for some days, in consequence of pain in his back and limbs. The bowels being constipated, he took purgatives and quinine for the fever, along with other medicine, from which he received little benefit.

When I saw him he said his health was excellent until the date of the attack. His temperature now was 101°; tongue foul; breath very fetid; no appetite; bad frontal headache; complained of general muscular pain throughout the body, especially in lumbar region, on stooping. Urine was passed in small quantity, not high coloured, but opaque, as it was passed, albuminous and very acid, specific gravity 1,036. The microscope showed it to contain a large number of altered blood corpuscles, dumb-bell and uric acid crystals and much epithelium; neither tube casts nor pus could be detected.

The treatment consisted in giving, hourly, drachm doses of citrate of potash, with plenty of barley water to drink. In six hours the general muscular pains had almost disappeared, and urine was excreted in large quantities. The medicine was then reduced to 1 drachm every three hours. The following day the patient expressed himself as quite well. The bowels had acted four times, the pain in the loins had gone, he could stoop without pain, and his appetite had returned, but his tongue was still foul. The urine was neutral, contained some blood discs, but no crystals. He was directed to continue the potassium citrate (1 drachm every three hours) along with the barley water, and for diet he had tea and toast and chicken broth with rice. On the second day the urine was neutral, without albumen, and very few blood discs could be found; but the tongue still being foul he was ordered a mixture containing nitro-hydrochloric acid with tincture of nux vomica, and to take 1 grain of grey powder every three hours. This had the desired effect, the tongue became clean and the urine normal, and the patient returned to the interior three days later in good health.

The treatment in these cases is simple and speedily efficacious; namely, render the urine alkaline and induce its excretion by directing the patient to drink as much barley water as he can take until urine is passed in large quantities, and, if necessary, apply hot fomentations across the loins. All the cases were treated on the same lines and were restored to health in three or four days.

The births of two male infants have to be recorded, both of which occurred during the cool season.

Pakhoi is about the most filthy town I have seen, and the health of its inhabitants is good or bad according as the rainfall is large or small. After two months dry weather the streets become loathsome; the stench from fermenting garbage on every side and from stagnant sewage in the underground drains is past description. During a long continuance of dry weather a serious outbreak of disease will be sure to make its appearance here.

No cases of malarial fever have occurred, nor are they likely to occur over the dry sandy ground of which the Pakhoi peninsula is composed.

Several cases of diarrhœa with vomiting, met with in most parts of China, in which death followed within a few hours from the commencement of the attack, took place during July, August and September. The diarrhœa did not take on the form of an epidemic, and was caused by eating unripe or unsound fruit. However, in several small towns remote from this place epidemic cholera was reported to be raging, and an eye-witness, who passed through one of these villages, states that it was deserted, and that the only living animal he saw in it was a pig.

By a letter lately received from Lungchow we learn that bubonic plague (*yang-tzŭ-chêng*, 羊子症, or, as it is known at Pakhoi, *li-tzŭ-chêng*, 瘰子症) made its appearance there during the latter part of March this year. Having originated in Yunnan, it passed through the town of Po-sê and the prefectural cities of Nan-ning and T'ai-p'ing, in Kwangsi, and thence to Lungchow, also in Kwangsi. Considering that a certain amount of merchandise passes regularly between Nan-ning and Pakhoi, it might be supposed the plague would find its way here; but up to the date of this Report no cases have occurred here since the spring of 1884.

I append a meteorological table (latitude, 21° 29′ N.; longitude, 109° 6′ E.), the temperature being taken according to the rules laid down by the Astronomer at the Hongkong Observatory.

METEOROLOGICAL TABLE, May 1889 to March 1890.

MONTH.	THERMOMETER.			RAINFALL.	MONTH.	THERMOMETER.			RAINFALL.
	Highest.	Lowest.	Mean.			Highest.	Lowest.	Mean.	
1889.	° *F.*	° *F.*	° *F.*	*Inches.*	1889.	° *F.*	° *F.*	° *F.*	*Inches.*
May	97	71	87.00	3.19	November	81	53	65.00	2.80
June	97	76	85.00	5.26	December	75	49	60.05	0.25
July	97	75	87.70	6.60	1890.				
August	94	72	82.70	30.23	January	77	45	68.00	3.39
September	93	72	83.80	12.48	February	87	48	79.00	0.46
October	94	63	79.00	1.22	March	86	41	61.50	3.26

DR. RALPH S. MILLER'S REPORT ON THE HEALTH OF KIUKIANG

For the Eight Months ended 31st March 1890.

I HAVE pleasure in recording that during the eight months ended 31st March there have been very few cases of serious illness among the foreign community, and no deaths.

Notwithstanding six weeks' almost continuous rain during the autumn, there has not appeared to be a greater amount of malarial fever than usual. Judging from an eight months' residence here, and the cases of illness met with among Europeans, I should say that malaria was comparatively infrequent, most of those who suffer from miasmatic chills or neuralgias having contracted the poison in other parts of China or the East, and even these state that they suffer less here than in most of the other ports.

Situated as Kiukiang is, surrounded almost entirely by water, and at times only a few feet above it, it would appear exceedingly likely that the excessive evaporation and consequent moisture, along with the flat character of the country round about, would make it anything but healthy. Such was the impression I received on getting a bird's-eye view of it from the Lu-shan Hills; but as my professional experience did not confirm it, I began to make inquiries as to the reasons for this.

Last summer was exceptionally hot, the thermometer on several occasions registering 103°. The Lu-shan range of hills, rising as they do to a height of 4,500 feet, and situated to the south, effectually shut out the wind from that quarter during the summer, and are chiefly responsible for the saying that "Kiukiang is the hottest place on the river." They, however, offer a compensation by affording the benefits of a high altitude and beautiful scenery, which are taken advantage of by invalids and others during the hot season.

From what I can learn, malaria has been much less frequent in the Concession during the last few years, owing to a number of sanitary improvements having been effected, notably in filling up stagnant pools and in elevating several of the roads and compounds. There is still room, however, for further improvements in this direction.

At present the Concession stands considerably higher than the neighbouring part of the city, many of the streets of which during last autumn were flooded for several weeks, and a vast amount of discomfort and sickness was induced in consequence.

At the hospital there are many cases of malaria; but some of them come long distances, so that it is very difficult to ascertain with any exactitude the districts where malaria is most prevalent. The low situation of many parts of the city, together with the squalor and filth,

the reeking atmosphere, the want of cleanliness and, in many instances, insufficient food, all tend to lower the vitality and make the constitution more vulnerable to the attacks of the malarial poison. In the country the same conditions do not obtain, at least to the same extent; but there the miasm is generated in the paddy fields by which the dwellings are surrounded, and there is little wonder that a considerable number of the inhabitants suffer in consequence.

The large plain lying to the west of Kiukiang is responsible for a great deal of the fever among the villages near it. It is flooded during the summer, but during spring and autumn it is marshy in many places, while the sun's rays are sufficiently strong to induce a rapid decomposition of the vegetable matter.

The same might be said with reference to the district north of the river, where many villages are situated on the dykes which have been built to keep the river in bounds. Notwithstanding these, however, there is an immense tract of country under water when the river is at its height, and very many of the inhabitants live in their boats until the water goes down again. The missionaries who visit that district report that there is always a large amount of sickness due directly to its malarial character. The width of the river, and the fact that it absorbs a certain amount of the malaria, must have a considerable influence in preventing the spread of disease to this side.

There were several acute cases of dysentery and dysenteric diarrhœa among the foreign community, but all made satisfactory recoveries. A case of tuberculosis of both lungs, with the usual phthisical symptoms, came up from Shanghai early in the autumn, but has very much improved in every respect from residence here.

One of the officers of the U.S.S. *Monocacy* developed symptoms of small-pox when in the port, and was transferred to the hospital. The disease ran a mild course, was discrete in type, and the patient made an uninterrupted and favourable recovery.

The number of in-door and out-door patients at the hospital has been steadily increasing, and the number admitted in March (135) has exceeded that of any previous month. Among these there have been many interesting cases.

One was that of a man who came in complaining of shortness of breath. On examination I found the breathing stertorous and laboured, with dulness on percussion over the whole of the right side, and breath sounds indistinguishable. I aspirated at the base, and drew off 100 ounces of pleuritic fluid, the breathing becoming more and more natural as the fluid was evacuated, until at the end it was perfectly easy.

Leprosy does not seem to be of very frequent occurrence in the immediate neighbourhood, but we have had about 20 cases during the last six months.

Two were brothers, who came 2,000 *li*, from the southern part of the province. On inquiring into their family history I found that their father and uncle had been similarly affected, and they said that there were many cases in their district. I kept one leper in the hospital for over three months, trying the effect of gurjun oil; but the man seemed to be gradually getting worse, although the treatment was steadily persisted in.

Eye diseases of all kinds have been especially frequent lately, the greater number being in a very advanced condition before relief has been sought. This is one of the most hopeful of the departments of the hospital work, as many regain at least sufficient sight to place them in a position to earn their own living or provide for their families. As the benefits of the hospital become better known, this class of cases will become still more numerous, with the result of diminishing, to some slight extent, the amount of suffering which blindness entails.

A mandarin's mother came, about two months ago, with cataract of both eyes of several years' standing. One cataract was extracted, and she returned home with good vision in that eye, promising to come back soon for the other eye to be operated upon.

One very noticeable point in operations of all kinds is the very slight tendency to inflammation among the Chinese, due in great measure to the spare diet to which they are accustomed. Strict Listerism is practically impossible, yet they seem to make marvellous recoveries in spite of their surroundings.

There have been three European children born during the period under review. One of the confinements well illustrated the danger that may follow the use of intra-uterine injections from passage of the fluid through the Fallopian tubes into the peritoneum. Rigors, with temperatures of 103° and 105°, on two occasions followed the washing out of the uterus, and at such a short interval as to make it evident that they were the result of it. At each time there were symptoms of peritonitis, but on leaving off the injections the case ran a favourable course.

I have been called to nine Chinese accouchements, all the patients having been in labour from one to four days. Out of these there were two deaths, due to puerperal eclampsia and exhaustion.

The first was a primipara, 22. Had been in labour three days, and was comatose when I arrived. On applying forceps, she had a convulsion, and I then learned that since the previous day she had been having similar fits at intervals. I put her deeply under chloroform, but had to perform craniotomy before I could get the child away. As she could not swallow, I gave her an enema of chloral and bromide, and inhalations of chloroform when the convulsions came on; but she gradually sank, and died eight hours after.

The second was a multipara, 38. Had been in labour about 24 hours. All her previous confinements had been premature. She seemed much exhausted, and on examination I found an exostosis protruding from the upper part of the sacrum, diminishing seriously the antero-posterior diameter of the pelvis. The axis-traction and Simpson's ordinary forceps had no effect in bringing down the child, and craniotomy had to be resorted to. Even after the head had been born, the shoulders would not engage in the pelvis until the arms had been brought down first. I had previously tried to turn, but could not get hold of the lower limbs to do so.

The mother rapidly sank from exhaustion after the child was born. The child was much above the average size.

One of the successful cases was where the heads of twins got locked in the pelvis; one of the children was saved.

For the following abstract of meteorological records I am indebted to Mr. LOVATT, the Harbour Master:—

METEOROLOGICAL TABLE, August 1889 to March 1890.

MONTH.	THERMOMETER.		RAIN.		MONTH.	THERMOMETER.		RAIN.	
	Highest.	Lowest.	Quantity.	No. of Days.		Highest.	Lowest.	Quantity.	No. of Days.
1889.	°	°	*Inches.*		1890.	°	°	*Inches.*	
August.....	100	68	3.52	9	January.....	65	32	1.80	5
September.....	99	65	8.05	13	February.....	69	34	5.15	13
October.....	83	55	9.09	24	March.....	68	37	6.87	13
November.....	68	46	3.86	8					
December.....	61	41	0.25	3					

DR. B. STEWART RINGER'S REPORT ON THE HEALTH OF AMOY

For the Year ended 31st March 1890.

THE summer of 1889 was unusually hot and prolonged, and both foreign residents and natives suffered considerably from the inconveniences generally attendant upon such conditions. The port was, however, quite free from epidemic cholera. Summer diarrhœa, boils and malarial fevers were the most numerous among cases treated.

Ten births and three deaths have to be recorded.

The first fatal case occurred in March 1889, in the person of an Englishman, aged 41, who had suffered from hemiplegia, due to cerebral softening. At a postmortem examination the superior surface of the brain was found deeply congested, and the dura mater slightly adherent in several places. The anterior portion of the left optic thalamus was bulging into the lateral ventricle and had degenerated into the consistence of thick cream; the right was in a similar condition, but less extensively changed. On section, the left corpus striatum showed a disc of degenerated material on its inner anterior aspect, and a smaller and more superficial zone of a similar nature was found on the right side.

The second was a death from heat fever, early in July. The patient was a German, about 40 years of age, and had exposed himself to the midday sun in a light straw hat. The temperature one hour and a half after death was found to be 108°.8. At a postmortem, 12 hours after death, the following points were observed. Rigor mortis was well marked. The posterior portions of body were covered with large, livid patches. Heart somewhat fatty; pericardium contained about $\frac{1}{2}$ ounce of liquid; the wall of right ventricle was thin and the ventricle contained a little frothy blood; left ventricle empty. The blood collected in the cavity of the thorax during the examination was dark, grumous and liquid, showing no tendency to coagulate. The lungs were both deeply congested throughout. The stomach contained several ounces of pale-coloured liquid, with the usual characteristic odour. Urinary and fæcal discharges were found in the clothing.

The third case, which was one of melæna and hæmatemesis, occurred in the same month. The patient was a Japanese, aged 27. He had been a sufferer from dyspepsia more or less all his life. When called upon to attend him for this complaint, I found on examination, about a week before his death, some swelling of the abdomen, with enlargement of the cutaneous veins and fluctuation apparent, which conditions, he said, had gradually come on during the few previous weeks. The apex beat of the heart was distinctly visible, slightly to the inner side of the left nipple. Over this spot, and for an area of about 1 inch around it, a systolic murmur (probably from tricuspid insufficiency) was audible most distinctly to the right and below, not audible at back. Three days before his death he began to pass tarry stools frequently and vomited dark liquid blood and black blood clots several times during the day. Ipecacuanha, ergot and turpentine were tried, without avail. The patient gradually became weaker, refused food and died comatose. No postmortem was obtainable.

Supra-pubic Lithotomy.

The following notes on four cases of removal of stone from the bladder in Chinese by the lately-revived operation above the pubes may be found of surgical interest:—

Case I.—Tian Lai, aged 30, presented himself at the Amoy Chinese Hospital on the 18th March 1889, and complained that for many years he had suffered much difficulty in passing water, and that for the last two weeks it had been constantly dribbling away. He seemed very weak, and bent his body forward as he walked painfully and slowly along.

After examination with sound, a stone of large size was diagnosed, and the patient being thin and a good deal wasted, it could be plainly felt by manipulation between the abdominal wall and the rectum.

On the 12th April 1889 chloroform was administered, and about 8 or 9 ounces of a warm solution of boracic acid (5 grains to the ounce) was injected into the bladder, and the base of the penis ligatured with a piece of thin india-rubber tubing, which retained the liquid perfectly. The bladder could now be felt above the pubes. No attempt was made to distend the rectum. An incision was made over the symphysis pubis and carried up in the median line towards the umbilicus for about 4 inches. The fascia and muscular fibres of the pyramidalis and rectus abdominis were carefully cut through to the full extent of the wound; then, with the fingers and handle of scalpel, the glistening surface of the bladder was gradually exposed, the thin layer of fat, with the peritoneum, being scraped upwards towards the top of the incision and held there out of harm's way by the fingers of an assistant. The bladder was now steadied by hooks and punctured with a sharp-pointed bistoury near the upper portion of the skin wound, and the bistoury carried in a straight line downwards towards the pubes. The index finger of the left hand was now quickly introduced into the bladder and closely followed by that of the right, and the stone grasped between them was brought upwards to the wound in the bladder, which, however, was not sufficiently large to allow its extraction. The stone was therefore released, and the wound lengthened towards the pubes. It was then again caught and, after some gentle manipulation, removed with the fingers.

The stone was of oval shape, measuring $2\frac{1}{2}$ inches long, $2\frac{3}{16}$ inches broad and $1\frac{5}{8}$ inch thick, and weighed 5 ounces and 40 grains. On section, it showed a thick external layer of phosphatic deposit, with alternating concentric layers within of a harder and darker material, probably uric acid. The patient believed it had been growing for more than 20 years.

The bladder having been washed out with a weak solution of boracic acid, the wound was allowed to remain open, and a soft india-rubber catheter placed in the bladder, with the end hanging out at the pubic end of the wound, which was covered with a carbolised oil dressing, changed twice daily.

Recovery was very protracted, as, eight days after the operation, a large bed-sore began to form over the sacrum, and was a source of great trouble. Up to this time the temperature had not risen over 101°.4, but now gradually increased to 103°.4. The sore was treated with lead lotion and iodoform ointment, pressure being removed as much as possible by means of an air cushion.

The catheter had to be frequently changed, as the urine contained mucus, pus and phosphatic deposit. On the 24th April the catheter was removed from the wound, and some urine passed by the urethra. On the 5th May (23 days after the operation) the temperature became normal, and the general condition improved. On the 22nd May the abdominal wound had nearly healed, the bladder had closed over and all the urine was passed by the urethra. The patient was, however, kept in the hospital for several weeks longer till the bed-sore had completely healed.

Some months after his discharge this patient again presented himself to seek advice about an abdominal swelling which had arisen since he left the hospital. This was found to be a ventral hernia, about the size of half an orange, at the upper part of the abdominal cicatrix. He was advised to wear a band, but did not place himself under further treatment, and has not been seen since.

CASE II.—TEK LIONG, a Chinese boy, 7 years of age, with a stone in the bladder, was put under chloroform on the 5th August 1889. A weak solution of boracic acid was injected into the bladder, and the penis ligatured. The rectum was not distended. An incision $2\frac{1}{2}$ inches long was made from the pubes upwards, and the bladder reached in the same manner as described in Case I. It was steadied with artery forceps and opened with a scalpel, the wound being subsequently enlarged by the fingers, and a stone, with a rather rough surface, measuring $1\frac{1}{2}$ inch long, $1\frac{1}{8}$ inch wide and $\frac{11}{16}$ inch thick, weighing 230 grains, and composed chiefly of uric acid, was removed.

A drainage tube was placed in the bladder, one end being brought out of the wound, which was covered with carbolised dressing. The drainage tube was removed on the third day, as the child was by no means amenable to treatment, and the crying and struggling produced when the tube was taken out to be cleaned seemed to be doing more harm than good, as some hæmorrhage took place, blocking the tube and wound with blood clots; these being removed, however, the urine flowed freely and gave no further trouble. The skin in the neighbourhood was kept constantly smeared with boracic acid ointment, to prevent excoriation, and folded cloths, which could be easily removed, were arranged to catch the dribbling urine. The highest temperature recorded was 102°.2.

On the 5th September a little, and on the 13th September all, of the urine was passed by the urethra, the opening into the bladder having closed. The patient was discharged, with the wound firmly healed, on the 25th September.

CASE III.—TIAN, a Chinese youth, aged 17, admitted into the Chinese Hospital, suffering from stone in the bladder, was, on the 10th September 1889, placed under chloroform, and the bladder having been distended with boracic acid solution, a stone was removed by an operation similar to that performed in the two preceding cases. The bladder in this case was drained by means of a catheter in the urethra; this was, however, removed on the third day after the operation, as it was thought to produce some irritation. The temperature, having risen to 103°, subsequently fell to 101°.2, which was the highest point reached during the future progress of the case. The calculus, which was formed of uric acid, was of a flattened, oval shape, $1\frac{3}{8}$ inch long, $1\frac{1}{8}$ inch wide and $\frac{11}{16}$ inch thick, and weighed 242 grains. The treatment was the same as in Case II. A small slough formed in the upper part of the wound, which separated 13 days after the operation, leaving the surface beneath healthy. 10 days after the operation a little urine was passed by the urethra; the quantity increased daily till 9th October, when all was passed by the natural channel. Patient discharged, 18th October, with wound firmly healed.

CASE IV.—KIN, a Chinese boy, aged 8 years, suffering from stone in the bladder, was operated on, under chloroform, on the 21st September 1889. 6 ounces of weak boracic solution were injected into the bladder. The rectum was not distended. The stone was, as in the three former cases, extracted above the pubes; weighed 77 grains; measured $1\frac{3}{16}$ inch long, $\frac{3}{4}$ inch wide and $\frac{9}{16}$ inch thick; and was composed of uric acid, showing alternate layers on section. In this case the peritoneum was brought plainly into view at the upper part of the wound, as the child strained a good deal, as if about to vomit, during the early part of the operation, and a portion of the peritoneal sac was forced out, looking like a delicate, thin bladder. As soon as observed, it was, of course, kept out of danger by fingers. The bladder was steadied by a loop of fairly thick carbolised catgut being passed through the muscular wall as near as possible to the upper part of the wound, and held firmly in position by an assistant. An incision was made in the bladder with a sharp-pointed bistoury, and the stone, being small and elongated, was readily extracted by the tips of the two index fingers. The bladder having been washed out with boracic solution, the edges of the wound were stitched together by means of interrupted carbolised catgut sutures, about $\frac{1}{4}$ inch apart, through the muscular coat only. The skin wound was treated in a similar manner, and a piece of narrow india-rubber drainage tube placed between it and the bladder, with one end brought out over the pubes. The patient passed water freely by the urethra the next morning, and the drainage tube was removed. The highest temperature recorded was 101°.2. The bladder was not quite watertight, as during

the next four days a few drops of urine passed through the wound during each act of micturition; and on the fifth day, owing to the partial absorption of the catgut sutures, which were rather thin, the lower part of the abdominal wound had opened up, and the same condition, in a more limited degree, had probably extended to the bladder, as the few drops were now increased to about a fluidrachm. The wound, which looked perfectly healthy, was strapped for the next few days with adhesive plaster. On the 2nd October (11 days after the operation) no more urine passed by it, and the patient progressed favourably till 1st November, when he was discharged with the wound firmly healed. He was seen again four months later; no local trouble existed, and the scar was perfectly sound.

The revival, during the last few years, of supra-pubic lithotomy, or the high operation for stone, as it was formerly called, has been productive of much consideration on the part of surgeons as to the best method of carrying out the details of the operation and the subsequent treatment of the patient. In this connexion the following short account of the history and the various steps of the operation, written nearly 70 years ago by J. CLOQUET, at that time surgeon to the Hospital of Saint-Louis, will doubtless be found interesting:—

La taille "hypogastrique," ou le "haut appareil," fut d'abord pratiquée par FRANCO, qui ramenait la pierre au-dessus du pubis avec les doigts introduits dans le rectum. ROUSSET ensuite proposa de faire saillir la vessie au-dessus du pubis en poussant une injection dans ce réservoir, afin de l'ouvrir plus facilement. La méthode du haut appareil était tombée en discrédit, lorsque le frère CÔME la fit revivre; elle convient dans le cas de pierre très-volumineuse et dans quelques circonstances particulières. On la pratique en ouvrant d'abord la portion membraneuse de l'urètre sur un cathéter introduit dans ce canal; on porte dans la vessie par cette incision la sonde à dard; on place le malade dans une situation horizontale; on fait une incision longitudinale sur la ligne blanche au-dessus du pubis; on éloigne le péritoine afin de ne pas l'ouvrir; on fait sortir le dard de la sonde de dedans en dehors à travers la vessie et on s'en sert comme d'une sonde cannelée pour fendre cette poche membraneuse à sa partie supérieure; on extrait ensuite le calcul. Après l'opération, pour éviter l'infiltration de l'urine dans le tissu cellulaire du bassin, on place une grosse canule par la boutonnière faite au canal de l'urètre, et une mèche de linge qui sert de filtre, dans la plaie supérieure. . . . . .

Entering the bladder by means of a puncture through the membranous portion of the urethra, and subsequently draining it from the same opening, is an extremely interesting point in this old operation; and for the latter purpose a very similar proceeding has lately been employed by Mr. C. J. BOND, of Leicester, in some special cases reported in his able article in the *Lancet* (10th August 1889), which I much regret not having been able to obtain earlier, as his clear and concise views would certainly have induced me to close the bladder wound in Cases II and III. The ingenious and simple method he recommends, of fixing the bladder with a loop, as done in Case IV, is most convenient and vastly superior either to hooks or forceps.

In Case I, the stone being very large and the bladder irritable and inflamed, I thought it well to leave the wound open; in consideration, however, of the fact—which I have not seen noted in any of the cases I have read—that a ventral hernia subsequently formed, I am inclined to think it would have been better to close the upper portion of the wound, which in this case was necessarily very long to allow a stone of such magnitude to be extracted; and in all cases where the incision is of great length I believe an abdominal belt of some sort should be worn for some months after healing is complete.

It will be observed that in none of the four cases was any attempt made to distend the rectum, partly because at the time of the first operation nothing suitable could be found and partly because the distended bladder could be distinctly felt above the pubes, and in the three subsequent cases it was purposely omitted, yet in no case was there any great difficulty in reaching the bladder. If care be taken, after dividing the skin, muscular fibres and fascia, to use the fingers and handle of the scalpel in removing the cellular tissue and fat covering the surface of the bladder, there is but little danger of wounding the peritoneum if the bladder has been previously fairly distended. This last point is very important; in Case II it was noticed at the time that proceedings would have been decidedly facilitated had more liquid been injected.

The bladder wall is sometimes remarkably tough, therefore a very sharp-pointed knife should always be used in opening it. To extract the calculus neatly is not always so easy as might be imagined, for, it being important to keep the opening in the bladder as small as possible, manipulation with the tips of the fingers, as advised, is not always practicable; and so little grasping force can be employed that the stone, if large or smooth, may readily slip from between them. Polypus, or some such forceps, may be used, but I think a lightly-made pair, with fenestrated blades after the fashion of ovum forceps, would act admirably.

In Case IV the much greater rapidity with which complete power of micturition returned, and the absence of any severe constitutional disturbance, strongly point, I think, to the advisability in uncomplicated cases of completely closing the bladder wound after the extraction of the stone. This should be done with numerous, unirritating sutures, such as carbolised catgut (Mr. BOND used silk, which is probably better), the great point to be aimed at undoubtedly being to render the bladder watertight, as in Mr. ANDERSON'S case (*Lancet*, 26th April 1890), in which no catheter was used throughout, and no escape of urine took place through the wound, notwithstanding repeated and violent attacks of coughing. This surgeon further advises the bladder to be tested before closing the skin wound. It may, however, be necessary to draw off the urine in some cases, and this is best done with a soft catheter every few hours after the operation, but should be omitted as soon as possible, particularly in the case of children, who are sometimes very intolerant of the use of the instrument.

The supra-pubic operation is much less difficult to perform than lateral lithotomy. It is sometimes almost bloodless, and by careful attention to the points mentioned above, should have no additional risks. In children and in cases of large calculi, where lithotroty is inadmissible, it would seem probable that it may become the operation of the future.

DR. HENRY LAYNG'S REPORT ON THE HEALTH OF SWATOW

For the Half-year ended 31st March 1890.

FOR the accompanying meteorological table I am indebted to the kindness of Captain C. H. PALMER, Harbour Master.

METEOROLOGICAL TABLE, October 1889 to March 1890.

MONTH.	WIND.					BAROMETER.				THERMOMETER.						WEATHER.		
	No. of Days N. to E.	No. of Days E. to S.	No. of Days S. to W.	No. of Days W. to N.	No. of Days Calm.	Highest by Day.	Lowest by Day.	Highest by Night.	Lowest by Night.	Highest by Day.	Lowest by Day.	Highest by Night.	Lowest by Night.	Averages. Wet Bulb.	Averages. Dry Bulb.	No. of Days Rain.	Rainfall.	No. of Days Fog.
1889.	*D. h.*	*D. h.*	*D. h.*	*D. h.*	*D. h.*	*Inches.*	*Inches.*	*Inches.*	*Inches.*	°	°	°	°	°	°	*D. h.*	*Inch.*	*D. h.*
October.....	10 6	12 0	3 6	2 6	3 6	30.274	29.830	30.215	29.830	86.0	73.5	83.0	76.0	75.5	79.4	1 0	2.57	...
November.....	14 18	11 18	...	1 0	2 12	30.516	30.041	30.492	30.040	77.0	64.0	76.0	65.0	65.3	69.5	1 13	2.37	0 12
December.....	16 12	10 0	0 12	3 0	1 0	30.490	30.032	30.470	30.010	69.0	58.0	67.0	60.0	56.7	60.3	0 6	0.08	0 6
1890.																		
January.....	9 0	15 18	...	1 18	4 12	30.502	29.948	30.484	29.846	68.0	53.5	67.0	56.0	45.9	57.8	1 23½	2.03	1 12
February.....	9 6	10 6	1 0	0 12	7 0	30.330	29.750	30.400	29.804	74.0	58.0	72.0	58.0	58.0	61.1	1 10	1.44	2 0
March.....	14 6	10 6	...	0 12	6 0	30.354	29.844	30.398	29.804	73.0	54.0	70.0	56.0	56.9	59.9	3 7	5.74	1 12

The autumn and winter were very mild.

During the six months under consideration the entire drainage system of the buildings and property of the Imperial Maritime Customs has been carefully attended to; many alterations and additions have been made which, when complete, will undoubtedly add much to the sanitary condition of the locality and prove a boon to all members of the staff.

In the reclamation of foreshore, enormous quantities of mud are being used to raise the level to that of the bund. The mud used is brought in boats from the bank of some other part of the river. The removal of vast quantities has, as far as I can learn, given rise to no disease, either at the present time or in previous years when similar operations were undertaken.

During this half-year the health of the foreign and native population has been less satisfactory than I had expected from my experience of the cool months in the early part of last year. This may be partly accounted for by a somewhat prolonged and very prevalent epidemic of influenza.

During October dysentery attacked many natives in the surrounding villages, but no case occurred among foreigners.

In December four cases of diphtheria occurred among the children of the families of two missionaries, who had all lately returned from England. The first was on the seventeenth day after arrival; the others followed at various intervals of a few days. These cases were under the care of Dr. LYALL, of the English Presbyterian Mission, who tells me that the attacks were not of a very severe nature, but, nevertheless, undoubtedly diphtheria. One case was followed by temporary loss of the power of accommodation of the eye and slight paralysis of the soft palate.

The first of these cases I had an opportunity of seeing myself. It is interesting to note that they were confined to members of two families; no others were seen in the compound, where there are a large number of native children; and no epidemic of diphtheria was prevalent amongst the natives of the district.

The origin is obscure. The children of the second family may have obtained the contagion from the children first attacked; but the primary source cannot be discovered. These are the first attacks of diphtheria that have occurred in this mission compound.

The following case is sufficiently interesting to report in full:—

A chair-coolie, strong, healthy and active, was seized at 7.30 P.M. with violent spasms of the legs and arms, clenching of the teeth, convulsive movements of muscles of the face. When seen by me at 8 P.M. his condition was as follows: lying in bed on his back, shoulders supported by a friend; a piece of bamboo firmly clenched between the teeth, an attack having just terminated; the pulse was quick and frequent; temperature 100°.8; intelligence perfectly clear; the countenance expressed extreme fear. He said he did not know why he was sick or what the sickness was. His surprise at being sick, and with a sickness that neither he nor his numerous Chinese friends understood, appeared to cause him much uneasiness.

The attacks were now recurring about once in every four minutes, each attack lasting about two minutes. During the attack the head was thrown back, the neck stiffened, the body arched (opisthotonus) and perfectly rigid, the teeth were clenched with a most powerful grip on a piece of bamboo, the arms and legs were seized with violent clonic spasms—at one second rigid and at another thrown out violently. During the attack the patient lost all control over himself; in the intervals the intellect was clear.

Immediately on the cessation of an attack a dose of chloral hydrate was given by the mouth, but this, as well as water or tea, instantly induced a fresh attack. 30 grains of chloral were now ordered every two hours, to be injected into the bowel. The attacks continuing as severe as before, at about 10 P.M. $\frac{1}{4}$ grain of morphia was injected hypodermically. In half an hour improvement commenced, and at 11.30 P.M. the attacks ceased. Patient now complained of great soreness in the throat, which was quickly relieved by a mustard poultice, and at 12 midnight sleep was obtained. During the attack the temperature did not rise above that noted at the onset.

The following morning the temperature was normal, the only remaining sign of illness being extreme prostration, which lasted for several days.

Previous to the attack patient was quite well, and denied having taken any medicine or eaten any food except his usual fish and rice. Can this be looked upon as an abortive case of tetanus, or is the more probable explanation that of poisoning? The duration of the whole attack was but four hours.

Diseases of the Testes.

Seven cases of orchitis and epididymitis combined and one of simple epididymitis came under treatment. These cases all occurred among the residents, and do not include those on board of steamers passing through the port. They were all observed during the cool months.

One case only was due to gonorrhœa; two followed cystitis; one was in connexion with a large varicocele. In the remaining four no venereal or other local cause existed. These four cases must, I think, be considered as of malarial origin. A popular idea is current here that men are frequently attacked with orchitis shortly after their arrival. The accuracy of this idea I cannot affirm; but one of the above cases occurred in a fresh arrival.

Epidemic Influenza.

During the latter part of February I had been told by several natives that an epidemic was prevailing in the surrounding villages, the symptoms of which corresponded very closely with those of "epidemic influenza."

The first case among the foreign population was recorded on 17th March, and the last on 26th April.

That the epidemic came to us from the south is apparent, as Hongkong was infected before, and Amoy after, Swatow. The native passengers from the Straits on arrival here quickly disperse to their own homes in the villages, which may possibly account for the early appearance of the epidemic in the districts outside Swatow.

It is impossible to estimate the number of natives that suffered. From all accounts, and from my own experience, the number must have been very great; of Chinamen in the employ of foreigners, a moderate estimate would be 50 per cent. The inhabitants of the villages appear to have suffered more in proportion than in Swatow, one village having the unenviable credit of being twice visited by the epidemic, many of its inhabitants being attacked a second time.

Among foreigners some 30 cases occurred, that is, about 20 per cent. of the entire population. The most general symptoms were constipation; 48 hours' fever, temperature rising to about 102°; slight bronchial catarrh, with cough commencing after the cessation of the fever; brow-ache; muscular pains and considerable lassitude; continuance of cough for some days following the attack. Coryza was seen but rarely.

Three cases were followed by acute bronchitis, all three being in men well on in middle life, and all occurred during a spell of cold, wet weather.

Two cases were followed by acute pneumonia. The first was a patient who had for months suffered from ascites; notwithstanding that the temperature ranged between 105° and 105°.6 for 36 hours, the lungs made a very fair recovery. The second occurred in a schoolboy of the

English Presbyterian Mission. Pneumonia was of a low type, and at the time of writing the consolidation has not quite disappeared.

One patient had a second attack following immediately after the first, the duration of the fever and elevation of temperature being the same in both attacks.

The extreme prostration so frequently reported as occurring in Europe was not seen here. Herpes of the neck was present once in connexion with the influenza, and two cases of catarrhal jaundice were under treatment when the epidemic was prevalent.

The Chinese appear to have suffered much less from the severity of the disease than foreigners.

Dr. A. LYALL tells me that at the E. B. Mission Hospital epistaxis was present in several cases at the onset, and diarrhœa in a few, but that vomiting was fairly frequent, and in some cases appeared to take the place of the cough.

In natives quinine proved the most successful medicine. The general treatment in foreigners consisted in a purge and, in the early stage, some simple febrifuge, and, later, a quinine tonic. In some of the first cases quinine was tried in the early stage, but no beneficial effects followed: it neither shortened the attack nor influenced the temperature, as far as one could see; as a tonic, after the first stage, it proved of great value.

Antipyrin was never prescribed; antifebrin, once successfully, to reduce a temperature of 105°.6, and twice in another case, to reduce a temperature of 105°.4, unsuccessfully.

Five births have occurred among the foreign population.

Two cases of small-pox from a coasting steamer were admitted into the Seamen's Hospital. The first died, and the second recovered. The first patient was admitted in an absolutely hopeless condition, with confluent small-pox, death taking place 36 hours after admission. This is the only death that has taken place during the six months.

II.—SPECIAL SERIES.